

Coastal Pathway Group AGM Keynote Presentation
Wednesday 12th May 2021, Christchurch Yacht Club



Actively travelling to a low carbon future: the role of quality infrastructure in encouraging walking and cycling

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Transport and greenhouse gas emissions

- February 2021: Climate Change Commission advised that current transport emissions need to fall by 47 % by 2035.
- To meet this, travel by private passenger vehicles needs to fall by alot
- How?

The 2000s!

- *“completion of current on-road network will see rise in number of cyclists”*



Who cycled?



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Who would like to cycle?

**Strong &
fearless**



Interested but concerned
~ 50 - 60%

**Not able or not
interested ~33%**



**Enthusied &
confident**

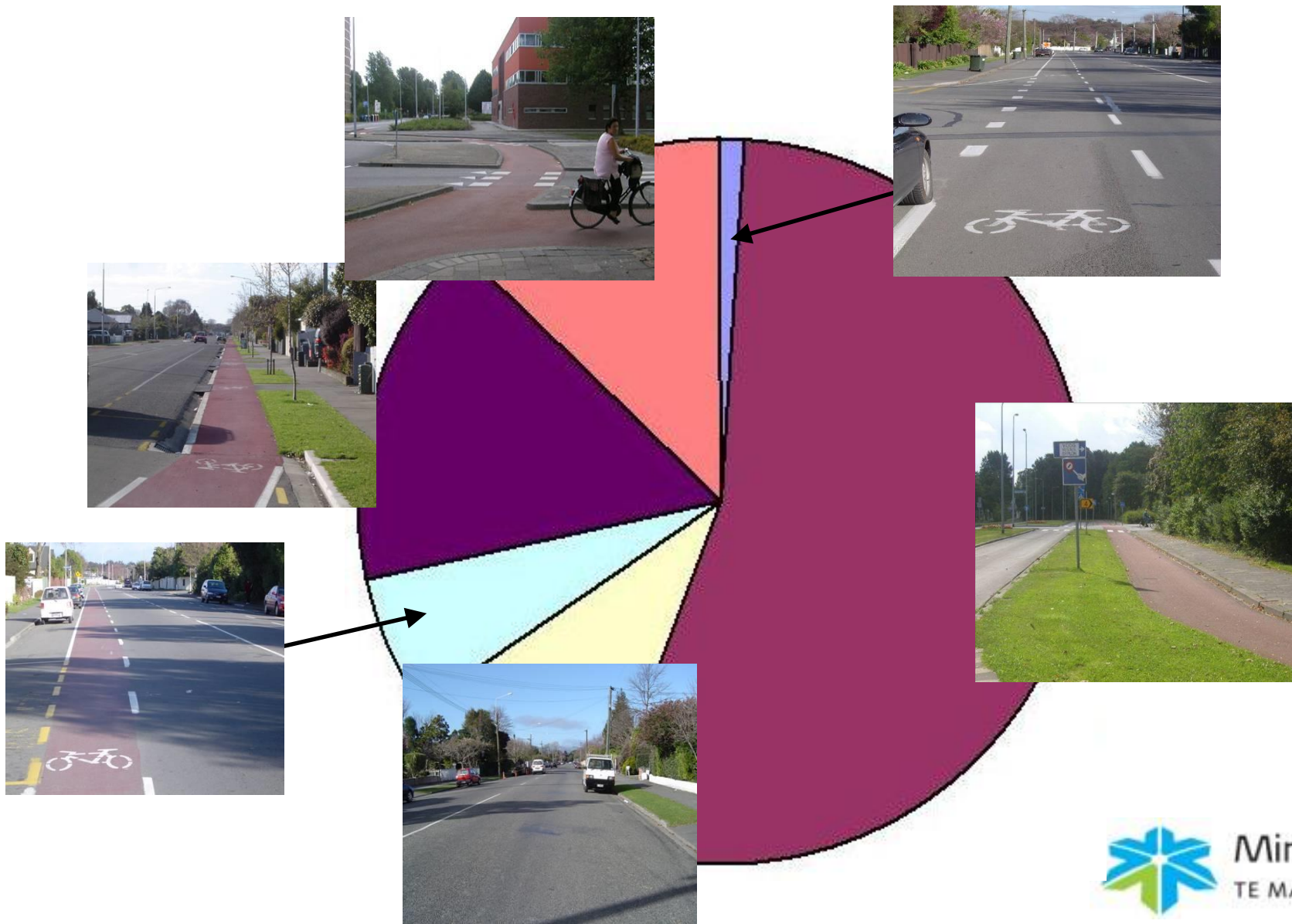
How do we get them cycling?

Do we just need to complete the network of painted white lines?

2005

Kingham S and Walsh T, 2005, Cycling to School: how can we reverse the trend in numbers? NZ Cycling Conference 2005, Hutt City, 14th-15th Oct 2005.

Focus on types of cycle route

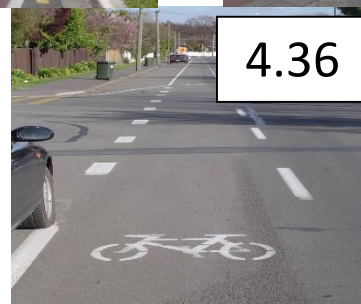


2005

Kingham S and Walsh T, 2005, Cycling to School: how can we reverse the trend in numbers? NZ Cycling Conference 2005, Hutt City, 14th-15th Oct 2005.

Focus on types of cycle route

Mean rank of cycle route type (1= most preferred, 6=least preferred)

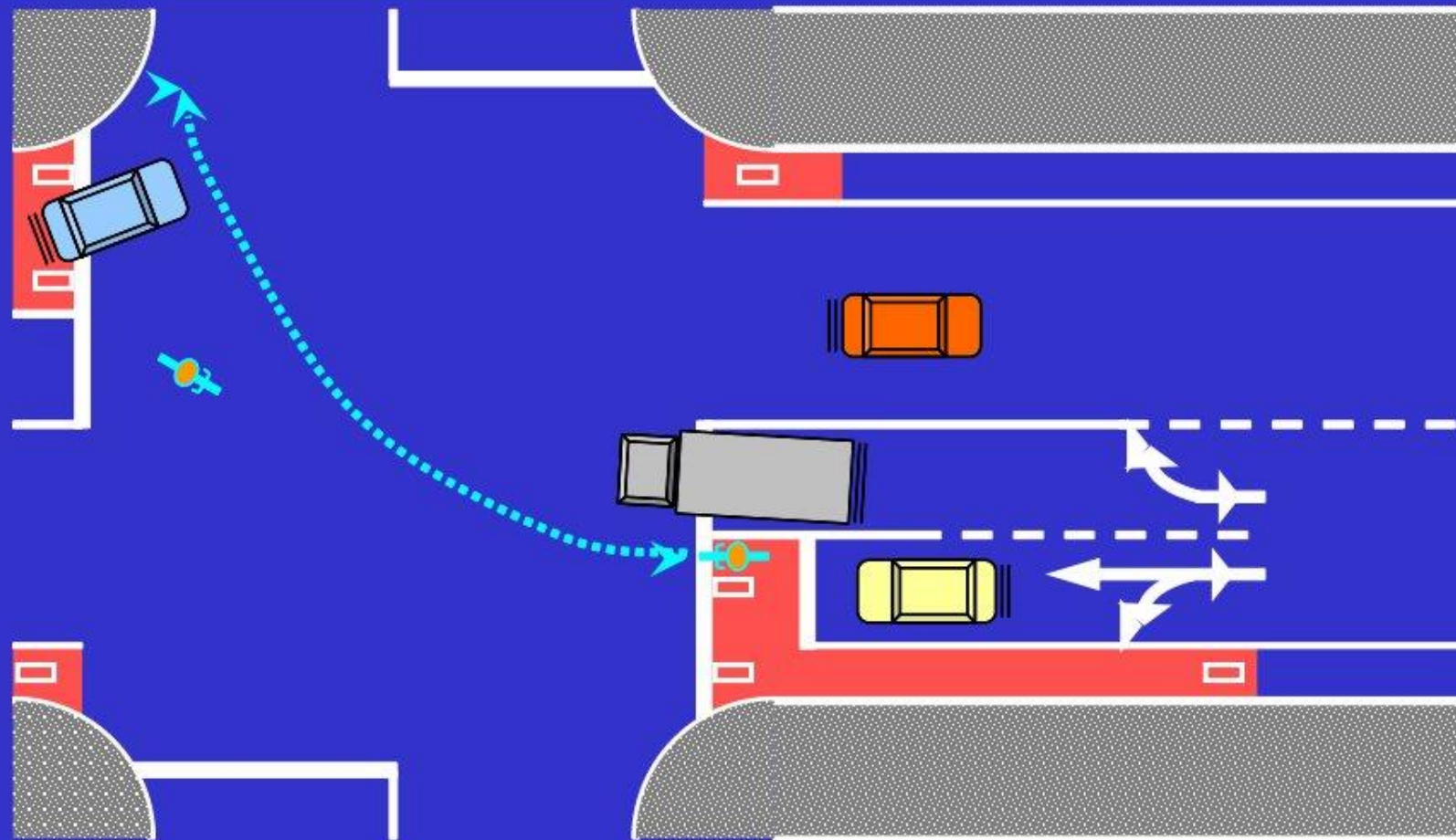


2005 Focus on types of cycle route

- People want *dedicated physically separate* cycle routes/paths (as used overseas)
- Council don't seem to agree
 - thinks what works overseas may not work here
 - problems at intersections
 - completion of current on-road network will see rise in number of cyclists

Attracting the new cyclists

- Assessment of the type of cycle infrastructure required to attract new cyclists
 - NZ Transport Agency funded research
 - To assess the type of infrastructure needed to attract 'new' cyclists
 - Investigate the barriers and motivations for cycling
-
- Source: Kingham S, Koorey G and Taylor K, 2011, Assessment of the type of cycle infrastructure required to attract new cyclists. NZTA Research Report 449.
<https://www.nzta.govt.nz/resources/research/reports/449/>





C3 - Right Turn Facility

Advance Stop Box



A4 - No Specific Cycling Provision



A6 - Marked Cycle Lane with extra Highlighting



A7 - Kerbed Cycle Lane with parking behind



A5 - Kerbed Cycle Lane directly behind parking



Findings

- Major barriers:
 - Safety (most significant)
 - Showering and changing facilities
 - Enjoyment of journey (relaxing and pleasant)



nsport

Type of infrastructure

Mid-Block Facilities

Shared Path

Cycleway behind parking with separation

Cycleway directly behind parking

Kerbed Cycle Lane

Cycle Lane with extra highlighting

Cycle Lane

No Specific Cycling Provision

0% 20% 40% 60% 80% 100%

Never Rarely Sometimes Frequently

Transport

Findings

- Perceived danger is main barrier!
- Physically separated cycle lanes are key



Hereford Street.

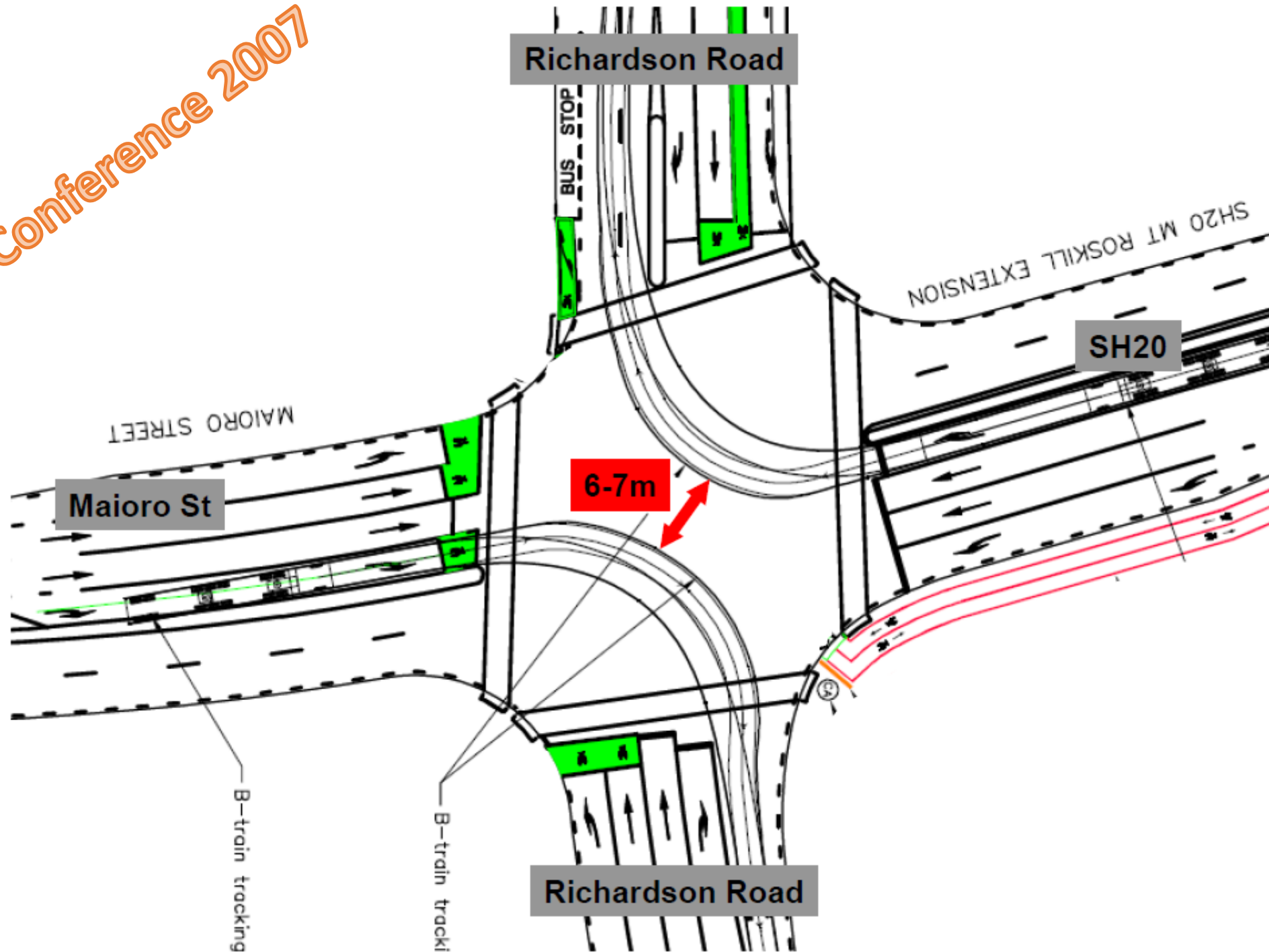
Christchurch F.G.R. 6176

Design is important

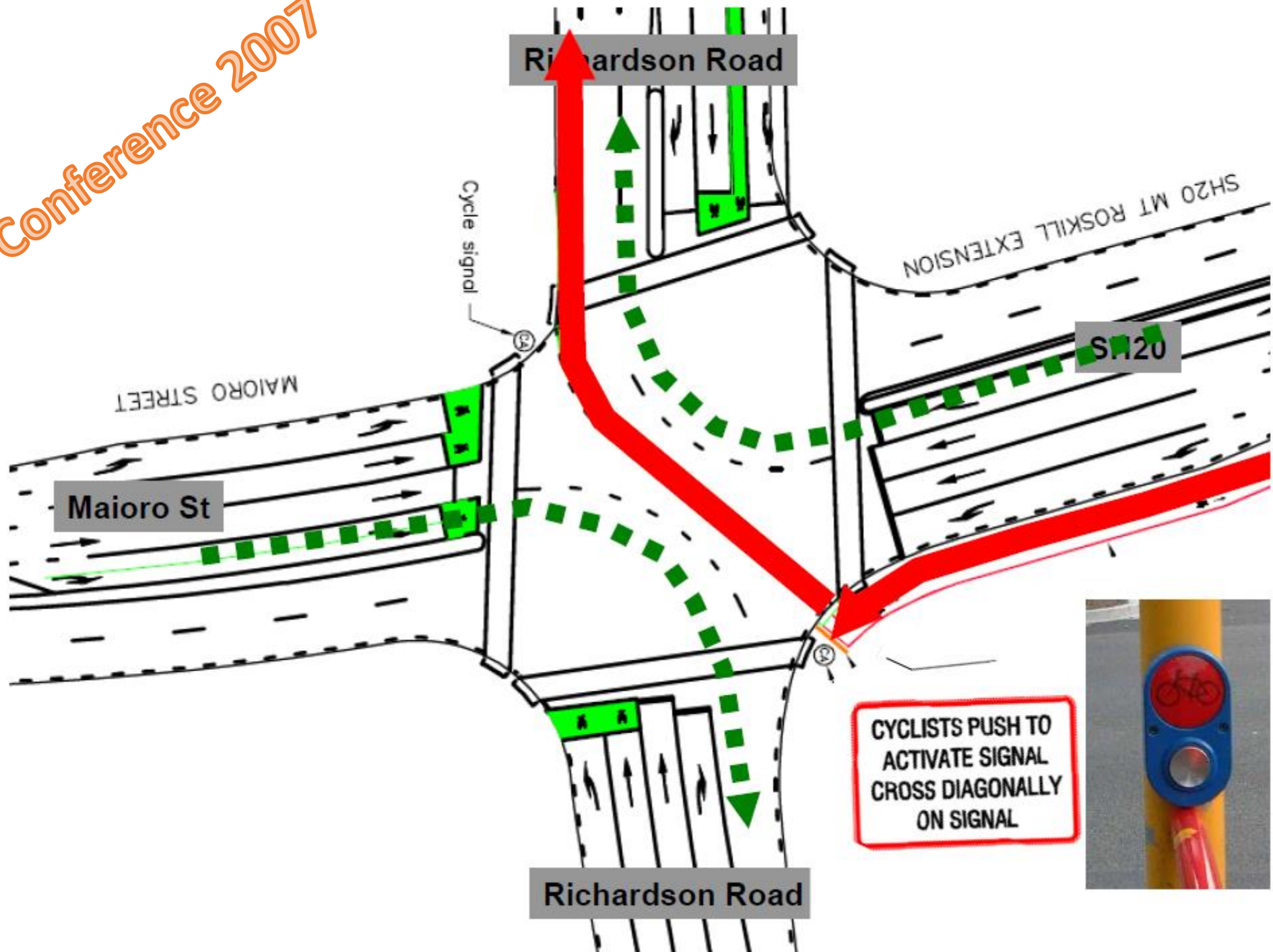
- Perceived safety
- Separation from traffic
 - Separated infrastructure on busy roads
 - Can be quiet streets
 - 'bike boulevards'
 - 'greenways'



NZ Cycling Conference 2007



NZ Cycling Conference 2007



Transport









But aren't they expensive?

Building 101km of cycleways across Christchurch to cost \$301m ▶

Tina Law · 05:00, Apr 03 2021



The cost of building 13 cycleways across Christchurch has ballooned to \$301 million – close to \$3m per kilometre.

The spiralling price tag has led some Christchurch city councillors to call for the cycleway programme to be halted.

But

Roads...

*The \$290m 16-kilometre Northern Corridor motorway extension, funded by the government, cost **\$18m a km** to build, while the second stage of the southern motorway worked out at **\$20m per km**.*

Meanwhile in Wellington



e.g. Transmission Gully

27 kms - ~~\$850m~~ (\$31m per km)

\$1.25 bn (\$46m per km)¹

<https://www.nzta.govt.nz/projects/wellington-northern-corridor/transmission-gully-motorway/>



State Highways

\$1,915m p.a.

¹ <https://www.stuff.co.nz/national/politics/300281133/review-finds-transmission-gully-doomed-from-the-start-with-unrealistic-expectations-of-cost>



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Value for money? Benefits vs Costs

Table 3: BCRs of the roads of national significance, 2011

Project	BCR	BCR plus WEBs*
1. Puhoi to Wellsford	0.8	1.1
2. Auckland Western Ring route	2.1	2.7
3. Victoria Park Tunnel	3.2	n/a
4. Waikato Expressway	1.4	1.8
5. Tauranga Eastern Link	1.4	1.8
6. Wellington Northern Corridor	1.1	1.4
7. Christchurch Motorways	2.0	2.4
Simple average (all)	1.7	n/a
Simple average (all except 3.)	1.5	1.9

* wider economic benefits

FUTURE NETWORK CHRISTCHURCH MAJOR CYCLEWAYS

APPROXIMATE ROUTES

The 13 cycleways shown are part of Christchurch City Council's planned major cycleway routes being constructed as part of the rebuild.

Data from the Christchurch City Council

Map by Andrew Douglas-Clifford (2017)

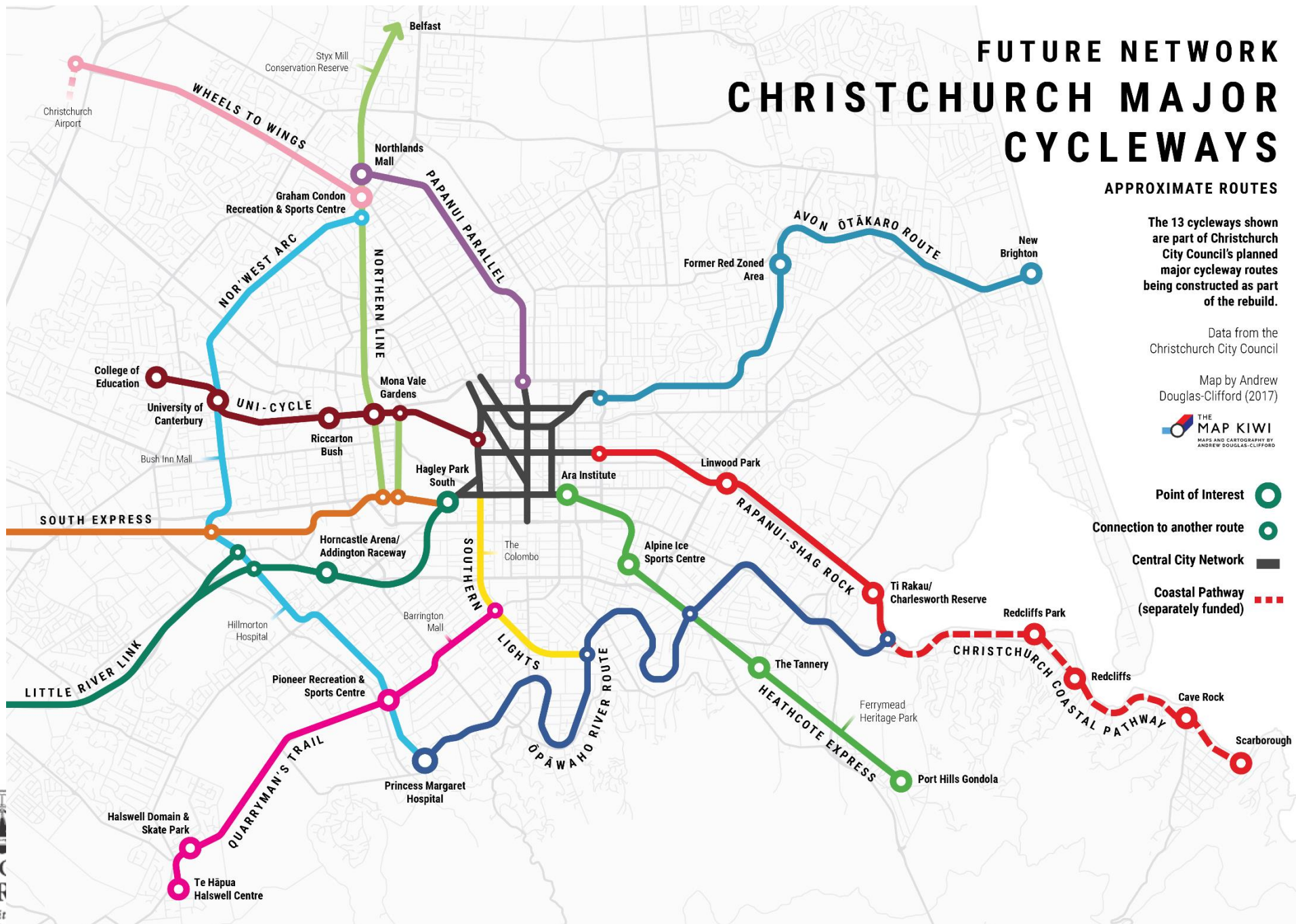


Point of Interest

Connection to another route

Central City Network

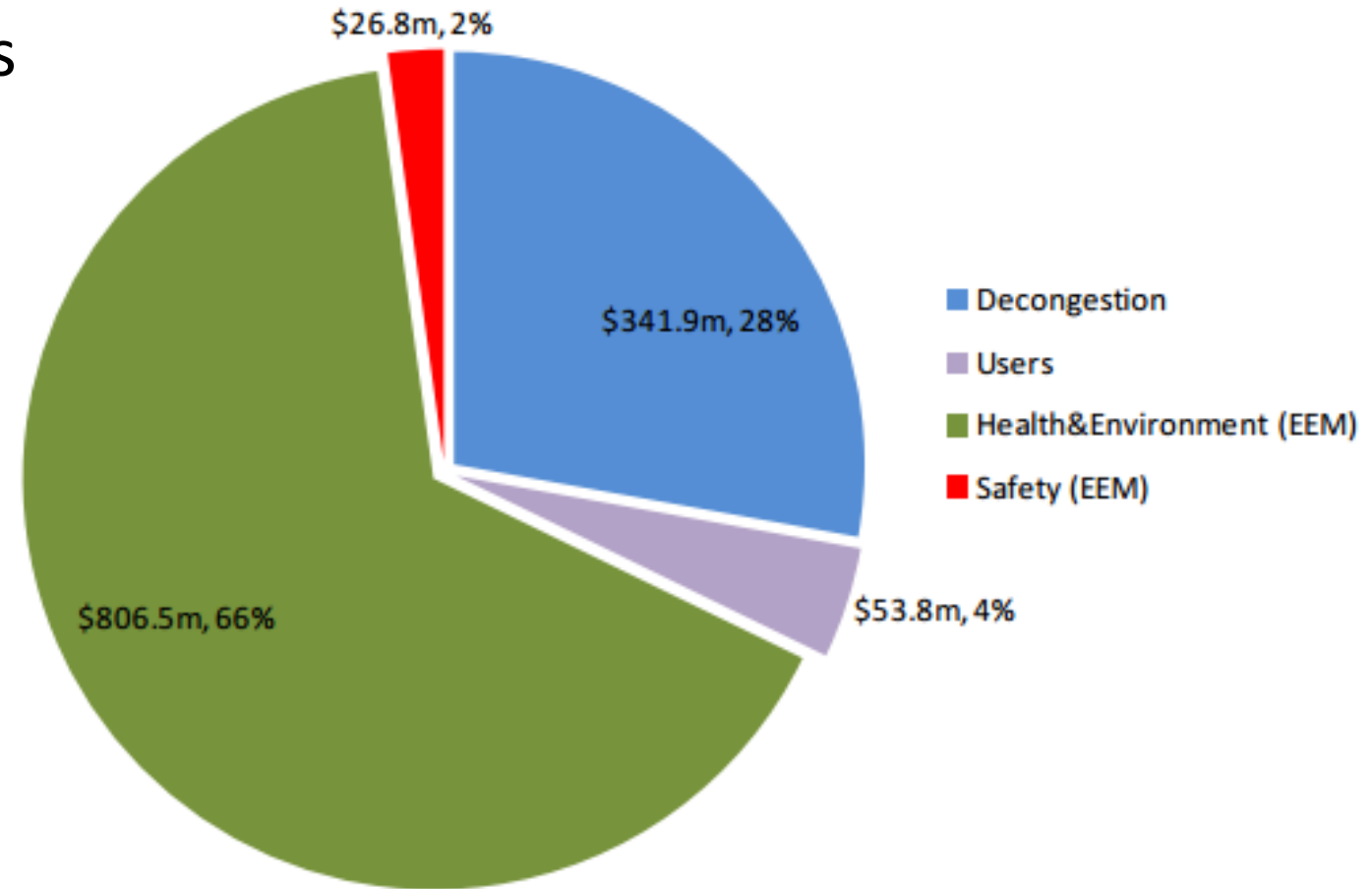
Coastal Pathway (separately funded)



Benefit Cost Ratios

- Christchurch Major Cycleways
- Benefit cost ratio of 8!

Source of Estimated Net Benefits (nb Present Value)



And what about climate change?

Cycling is ten times more important than electric cars for reaching net-zero cities

March 30, 2021 1.59am AEDT





Global Environmental Change

Volume 67, March 2021, 102224



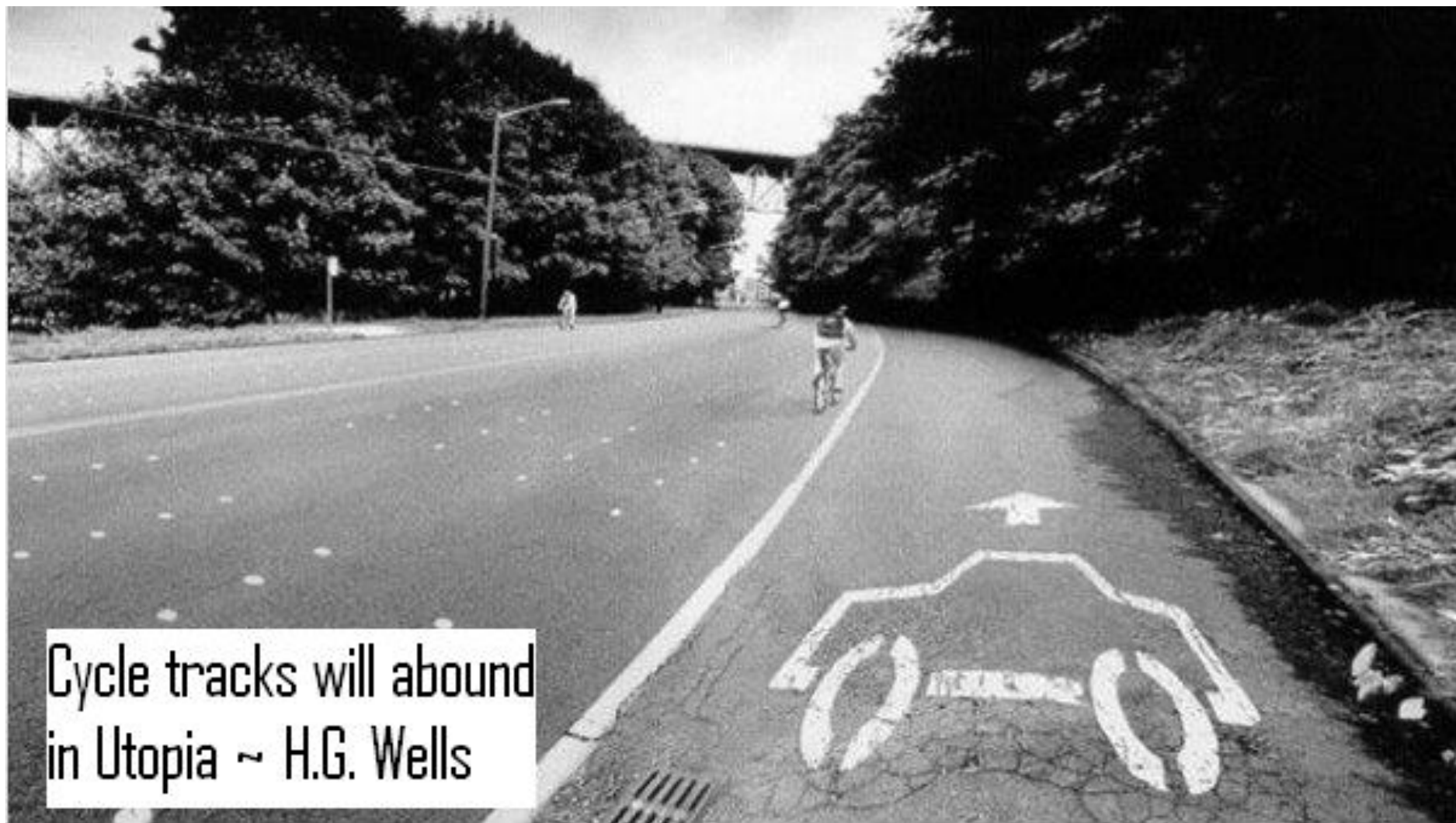
The climate change mitigation impacts of active travel: Evidence from a longitudinal panel study in seven European cities

Christian Brand ^a  , Thomas Götschi ^b, Evi Dons ^{c, d}, Regine Gerike ^e, Esther Anaya-Boig ^f, Ione Avila-Palencia ^{g, h}, Audrey de Nazelle ^f, Mireia Gascon ^{g, i, j}, Mailin Gaupp-Berghausen ^k, Francesco Iacorossi ^l, Sonja Kahlmeier ^{m, n}, Luc Int Panis ^{c, d, s}, Francesca Racioppi ^o, David Rojas-Rueda ^{g, q}, Arnout Standaert ^c, Erik Stigell ^r, Simona Sulikova ^a, Sandra Wegener ^p, Mark J. Nieuwenhuijsen ^{g, i, j}

<https://theconversation.com/cycling-is-ten-times-more-important-than-electric-cars-for-reaching-net-zero-cities-157163>
<https://doi.org/10.1016/j.gloenvcha.2021.102224>



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Cycle tracks will abound
in Utopia ~ H.G. Wells